IPT - Data Network Refresh (Toll Bypass) & IP Telephony

IPT - Data Network Refresh (Toll Bypass) & IP Telephony	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass) & IPT						
2. Cabling	$ 5,789,800	$ 5,202,200	$ 5,043,800	$ 4,964,600	$ 4,964,600	$ 25,965,000
3. Power in Closets	$ 508,920	$ 459,135	$ 425,945	$ 409,350	$ 409,350	$ 2,212,700
4. Data Network Refresh						$ -
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony						$ -
a.Equipment	$ 8,664,893	$ 6,210,002	$ 5,791,326	$ 5,581,988	$ 4,724,243	$ 30,972,451
b. Installation	$ 2,553,665	$ 1,896,553	$ 1,780,630	$ 1,722,669	$ 1,710,454	$ 9,663,971
8. Training	$ 197,236	$ 164,576	$ 155,245	$ 150,579	$ 150,579	$ 818,215
9. Trade-In Value	$ (1,621,252)	$ (948,130)	$ (906,262)	$ (885,328)	$ (799,554)	$ (5,160,526)
10. Total Refresh & IPT Implementation	**$ 27,369,962**	**$ 16,904,329**	**$ 16,639,677**	**$ 15,863,850**	**$ 15,079,665**	**$ 91,857,483**
11. Annual Debt Service	$ 5,960,191	$ 9,641,345	$ 13,264,867	$ 16,719,441	$ 20,003,249	$ 65,589,093
12. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
13. Net Loss/(Savings)	**$ (5,396,916)**	**$ (1,715,762)**	**$ 1,907,760**	**$ 5,362,334**	**$ 8,646,142**	**$ 8,803,558**
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass) & IPT						
Maintenance:						
14. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$ 4,148,570
15. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
16. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
17. IP Telephony	$ -	$ 2,013,314	$ 2,954,080	$ 3,409,053	$ 3,833,206	$ 12,209,654
18. Replace by IP Telephony Maintenance	$ (121,899)	$ (330,869)	$ (500,657)	$ (661,738)	$ (805,405)	$ (2,420,568)
19. Net Maintenance	**$ (202,772)**	**$ 2,097,864**	**$ 3,137,008**	**$ 3,699,066**	**$ 4,328,592**	**$ 13,059,758**
20. Data Network Circuit Capacity	$ -	$ -	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
21. Circuits	$ (137,137)	$ (411,412)	$ (685,687)	$ (959,962)	$ (1,097,099)	$ (3,291,297)
22. Toll Bypass	$ -	$ (156,555)	$ (469,666)	$ (1,174,164)	$ (2,504,883)	$ (4,305,268)
23. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
24. MACs	$ (477,864)	$ (814,452)	$ (1,134,211)	$ (1,437,140)	$ (1,689,581)	$ (5,553,248)
25. Total Anticipated Savings	**$ (615,002)**	**$ (1,382,420)**	**$ (2,598,223)**	**$ (4,085,698)**	**$ (6,320,428)**	**$ (15,001,769)**
26. Total Ongoing Costs/(Savings)	**$ (817,774)**	**$ 715,444**	**$ 1,552,545**	**$ 627,129**	**$ (978,076)**	**$ 1,099,269**
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	**$ (6,214,689)**	**$ (1,000,318)**	**$ 3,460,305**	**$ 5,989,463**	**$ 7,668,066**	**$ 9,902,827**
28. TCO IPT	$ 60,154,013	$ 65,368,385	$ 69,829,007	$ 72,358,165	$ 74,036,769	$ 341,746,339
29. Net Loss/(Savings) IPT	$ (6,214,689)	$ (1,000,318)	$ 3,460,305	$ 5,989,463	$ 7,668,066	$ 9,902,827
30. Debt Services Remaining						$ 34,427,152

Financial Assumptions: IPT - Data Network Refresh (Toll Bypass) & IP Telephony

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
3. Power in Closets - Upgrades needed to support IP Telephony:
    a. Security - assume that all closets have capability to lock today.
    b. Power - 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ $750/room; 95% of rooms will need a large capacity UPS @ $3700/room.
    c. Number of closets - of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus - 175 IDF & 23 MDF; off Phoenix mall sites - 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
    d. Environmental - 95% of closets need isolated A/C controls @ $500/room; 90% of MDF rooms need separte A/C unit at $2500/room.
    e. Installation Hardware - 10% of closets require additional data rack & associated cable management components @ $750/room.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO.
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List prices plus government discounts.
7. IP Telephony:
    a. Core network & voice services enginneered for redundancy & survivability
    b. Engineered for basic 911 (additional costs may be required for E911).
    c. Remote sites where practicable, routers installed instead of call processors.
    d. List prices with government discounts.
    e. Integrator costs of 10% are included in the implementation costs.
    f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
8. Training - Train the trainers session: 42 IT voice personnel @ $14K/person & 42 IT WAN personnel @ $6K/person.
9. Trade-In Value - 10% of capital investment based on bids received by State of Alaska.
10. Total Refresh & IPT Implementation - Sum of items 2 through 9.
11. Annual Debt Service - Financing of Implementation costs @ 3.4%.
12. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
13. Net Loss/(Savings) - Sum of items 10 through 12.
14. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
15. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
16. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
17. IP Telephony Maintenance - Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
18. Replace by IP Telephony Maintenance - Ongoing voice equipment maintenance costs that have been replaced with new equipment.
19. Net Maintenance - Sum of items 14. through 18.
20. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
21. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
22. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
23. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54,037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
24. MACs - Savings with moves, adds and changes due to implementation of IP Telephony:
    a. MAC average annual cost of $40 per employee based on average between ATS @ $16.28/employee & industry average @ $48/employee.
    b. Savings each year based on % migration to IP Telephony.
25. Total Anticipated Savings - Sum of items 21. through 24.
26. Total Ongoing Costs/(Savings) - Sum of items 19., 20., & 25.
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT - Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IP Telephony.
28. TCO IPT - Sum of items 1., & 27.; represents new TCO after implementing Data Network Refresh & IP Telephony.
29. Net Loss/(Savings) IPT - Difference of items 1. & 28; represents incremental impact to TCO.
30. Debt Services Remaining - Debt service remaining after year 5.

As Is - Data Network Refresh (Toll Bypass)

As Is - Data Network Refresh (Toll Bypass)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass)						
2. Cabling	$ -	$ -	$ -	$ -	$ -	$ -
3. Power in Closets	$ -	$ -	$ -	$ -	$ -	$ -
4. Data Network Refresh						
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony	$ -	$ -	$ -	$ -	$ -	$ -
a.Equipment	$ -	$ -	$ -	$ -	$ -	$ -
b. Installation	$ -	$ -	$ -	$ -	$ -	$ -
8. Training	$ -	$ -	$ -	$ -	$ -	$ -
9. Trade-In Value	$ (754,763)	$ (327,130)	$ (327,130)	$ (327,130)	$ (327,130)	$ (2,063,281)
10. Total Refresh Implementation	**$ 10,521,938**	**$ 3,592,863**	**$ 4,021,863**	**$ 3,592,863**	**$ 3,592,863**	**$ 25,322,392**
11. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
12. Net Loss/(Savings)	$ (835,169)	$ (7,764,244)	$ (7,335,244)	$ (7,764,244)	$ (7,764,244)	$ (31,463,143)
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass)						
Maintenance:						
13. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$ 4,148,570
14. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
15. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
16. Net Maintenance	**$ (80,873)**	**$ 309,113**	**$ 470,975**	**$ 632,836**	**$ 875,570**	**$ 2,207,620**
17. Data Network Circuit Capacity	$ -	$ -	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
18. Circuits	$ (137,137)	$ (411,412)	$ (685,687)	$ (959,962)	$ (1,097,099)	$ (3,291,297)
19. Toll Bypass	$ -	$ (156,555)	$ (469,666)	$ (1,174,164)	$ (2,504,883)	$ (4,305,268)
20. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
21. MACs	$ -	$ -	$ -	$ -	$ -	$ -
22. Total Anticipated Savings	**$ (137,137)**	**$ (567,967)**	**$ (1,464,012)**	**$ (2,648,558)**	**$ (4,630,847)**	**$ (9,448,521)**
23. Total Ongoing Costs/(Savings)	**$ (218,010)**	**$ (258,854)**	**$ 20,723**	**$ (1,001,962)**	**$ (2,741,517)**	**$ (4,199,621)**
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	**$ (1,053,179)**	**$ (8,023,098)**	**$ (7,314,521)**	**$ (8,766,206)**	**$ (10,505,760)**	**$ (35,662,764)**
As Is Loss/(Savings)						
25. FTE Savings	$ -	$ -	$ -	$ -	$ -	$ -
26. Total As Is Loss/(Savings)	$ -	$ -	$ -	$ -	$ -	$ -
27. TCO As Is	$ 65,315,523	$ 58,345,605	$ 59,054,182	$ 57,602,497	$ 55,862,942	$ 296,180,749
28. Net Loss/(Savings) As Is	$ (1,053,179)	$ (8,023,098)	$ (7,314,521)	$ (8,766,206)	$ (10,505,760)	$ (35,662,764)

Financial Assumptions: As Is - Data Network Refresh (Toll Bypass)

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Not applicable.
3. Power in Closets - Not applicable.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List price plus government discounts.
7. IP Telephony - Not applicable.
8. Training - Not applicable.
9. Trade-In Value - 10% of capital investment based on bids received by State of Alaska.
10. Total Refresh Implementation - Sum of items 2 through 9.
11. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
12. Net Loss/(Savings) - Sum of items 10 through 11.
13. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
14. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
15. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
16. Net Maintenance - Sum of items 13. through 15.
17. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
18. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
19. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
20. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54,037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
21. MACs - Not applicable.
22. Total Anticipated Savings - Sum of items 18. through 21.
23. Total Ongoing Costs/(Savings) - Sum of items 16., 17., & 22.
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass) - Sum of items 12. & 23.; represents incremental impact of implementing Data Network Refresh.
25. FTE Savings - No change in FTE for the "As Is" service delivery option.
26. Total As Is Loss/(Savings) - Sum of item 25.
27. TCO As Is - Sum of items 1., 24., & 26; represents new TCO after implementing Data Network Refresh for the As Is service delivery option.
28. Net Loss/(Savings) As Is - Difference of items 1. & 30; represents incremental impact to TCO.

As Is - Data Network Refresh (Toll Bypass) & IP Telephony

As Is - Data Network Refresh (Toll Bypass) & IP Telephony	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass) & IPT						
2. Cabling	$ 5,789,800	$ 5,202,200	$ 5,043,800	$ 4,964,600	$ 4,964,600	$ 25,965,000
3. Power in Closets	$ 508,920	$ 459,135	$ 425,945	$ 409,350	$ 409,350	$ 2,212,700
4. Data Network Refresh						$ -
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony						$ -
a.Equipment	$ 8,664,893	$ 6,210,002	$ 5,791,326	$ 5,581,988	$ 4,724,243	$ 30,972,451
b. Installation	$ 2,553,665	$ 1,896,553	$ 1,780,630	$ 1,722,669	$ 1,710,454	$ 9,663,971
8. Training	$ 197,236	$ 164,576	$ 155,245	$ 150,579	$ 150,579	$ 818,215
9. Trade-In Value	$ (1,621,252)	$ (948,130)	$ (906,262)	$ (885,328)	$ (799,554)	$ (5,160,526)
10. Total Refresh & IPT Implementation	**$ 27,369,962**	**$ 16,904,329**	**$ 16,639,677**	**$ 15,863,850**	**$ 15,079,665**	**$ 91,857,483**
11. Annual Debt Service	$ 5,960,191	$ 9,641,345	$ 13,264,867	$ 16,719,441	$ 20,003,249	$ 65,589,093
12. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
13. Net Loss/(Savings)	**$ (5,396,916)**	**$ (1,715,762)**	**$ 1,907,760**	**$ 5,362,334**	**$ 8,646,142**	**$ 8,803,558**
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass) & IPT						
Maintenance:						
14. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$ 4,148,570
15. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
16. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
17. IP Telephony	$ -	$ 2,013,314	$ 2,954,080	$ 3,409,053	$ 3,833,206	$ 12,209,654
18. Replace by IP Telephony Maintenance	$ (121,899)	$ (330,869)	$ (500,657)	$ (661,738)	$ (805,405)	$ (2,420,568)
19. Net Maintenance	**$ (202,772)**	**$ 2,097,864**	**$ 3,137,008**	**$ 3,699,066**	**$ 4,328,592**	**$ 13,059,758**
20. Data Network Circuit Capacity	**$ -**	**$ -**	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
21. Circuits	$ (137,137)	$ (411,412)	$ (685,687)	$ (959,962)	$ (1,097,099)	$ (3,291,297)
22. Toll Bypass	$ -	$ (156,555)	$ (469,666)	$ (1,174,164)	$ (2,504,883)	$ (4,305,268)
23. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
24. MACs	$ (477,864)	$ (814,452)	$ (1,134,211)	$ (1,437,140)	$ (1,689,581)	$ (5,553,248)
25. Total Anticipated Savings	**$ (615,002)**	**$ (1,382,420)**	**$ (2,598,223)**	**$ (4,085,698)**	**$ (6,320,428)**	**$ (15,001,769)**
26. Total Ongoing Costs/(Savings)	**$ (817,774)**	**$ 715,444**	**$ 1,552,545**	**$ 627,129**	**$ (978,076)**	**$ 1,099,269**
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	**$ (6,214,689)**	**$ (1,000,318)**	**$ 3,460,305**	**$ 5,989,463**	**$ 7,668,066**	**$ 9,902,827**
As Is Loss/(Savings)						
28. FTE Savings	$ -	$ -	$ -	$ -	$ -	$ -
29. Total As Is Loss/(Savings)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
30. TCO As Is	$ 60,154,013	$ 65,368,385	$ 69,829,007	$ 72,358,165	$ 74,036,769	$ 341,746,339
31. Net Loss/(Savings) As Is	$ (6,214,689)	$ (1,000,318)	$ 3,460,305	$ 5,989,463	$ 7,668,066	$ 9,902,827
32. Debt Services Remaining						$ 34,427,152

Financial Assumptions: As Is - Data Network Refresh (Toll Bypass) & IP Telephony

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
3. Power in Closets - Upgrades needed to support IP Telephony:
    a. Security - assume that all closets have capability to lock today.
    b. Power - 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ $750/room; 95% of rooms will need a large capacity UPS @ $3700/room.
    c. Number of closets - of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus - 175 IDF & 23 MDF; off Phoenix mall sites - 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
    d. Environmental - 95% of closets need isolated A/C controls @ $500/room; 90% of MDF rooms need separte A/C unit at $2500/room.
    e. Installation Hardware - 10% of closets require additional data rack & associated cable management components @ $750/room.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List prices plus government discounts.
7. IP Telephony:
    a. Core network & voice services enginneered for redundancy & survivability
    b. Engineered for basic 911 (additional costs may be required for E911).
    c. Remote sites where practicable, routers installed instead of call processors.
    d. List prices with government discounts.
    e. Integrator costs of 10% are included in the implementation costs.
    f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
8. Training - Train the trainers session: 42 IT voice personnel @ $14K/person & 42 IT WAN personnel @ $6K/person.
9. Trade-In Value - 10% of capital investment based on bids received by Alaska.
10. Total Refresh & IPT Implementation - Sum of items 2 through 9.
11. Annual Debt Service - Financing of Implementation costs @ 3.4%.
12. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
13. Net Loss/(Savings) - Sum of items 10 through 12.
14. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
15. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
16. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
17. IP Telephony Maintenance - Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
18. Replace by IP Telephony Maintenance - Ongoing voice equipment maintenance costs that have been replaced with new equipment.
19. Net Maintenance - Sum of items 14. through 18.
20. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
21. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
22. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
23. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54,037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
24. MACs - Savings with moves, adds and changes due to implementation of IP Telephony:
    a. MAC average annual cost of $40 per employee based on average between ATS @ $16.28/employee & industry average @ $48/employee.
    b. Savings each year based on % migration to IP Telephony.
25. Total Anticipated Savings - Sum of items 21. through 24.
26. Total Ongoing Costs/(Savings) - Sum of items 19., 20., & 25.
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT - Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IP Telephony.
28. FTE Savings - No change in FTE for the "As Is" service delivery option.
29. Total As Is Loss/(Savings) - Sum of item 28.
30. TCO As Is - Sum of items 1., 27., & 29; represents new TCO after implementing Data Network Refresh & IP Telephony for the As Is service delivery option.
31. Net Loss/(Savings) As Is - Difference of items 1. & 30; represents incremental impact to TCO.
32. Debt Services Remaining - Debt service remaining after year 5.

Decentralized - Data Network Refresh (Toll Bypass)

Decentralized - Data Network Refresh (Toll Bypass)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass)						
2. Cabling	$ 7,390,780	$ -	$ -	$ -	$ -	$ 7,390,780
3. Power in Closets	$ 1,616,800	$ -	$ -	$ -	$ -	$ 1,616,800
4. Data Network Refresh						$ -
a. Equipment	$ 12,756,836	$ 1,819,525	$ 1,418,227	$ 1,366,930	$ 3,271,296	$ 20,632,814
b. Installation	$ 1,914,122	$ 321,041	$ 269,550	$ 252,701	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony	$ -	$ -	$ -	$ -	$ -	$ -
a.Equipment	$ 14,301,881	$ -	$ -	$ -	$ -	$ 14,301,881
b. Installation	$ 4,861,136	$ -	$ -	$ -	$ -	$ 4,861,136
8. Training	$ 560,599	$ -	$ -	$ -	$ -	$ 560,599
9. Trade-In Value	$ (2,705,872)	$ (181,953)	$ (141,823)	$ (136,693)	$ (327,130)	$ (3,493,469)
10. Total Refresh Implementation	**$ 43,614,030**	**$ 1,958,613**	**$ 1,974,955**	**$ 1,482,938**	**$ 3,592,863**	**$ 52,623,400**
11. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
12. Net Loss/(Savings)	$ 32,256,923	$ (9,398,494)	$ (9,382,152)	$ (9,874,169)	$ (7,764,244)	$ (4,162,135)
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass)						
Maintenance:						
13. Data Network Refresh	$ -	$ 1,083,991	$ 1,260,675	$ 1,394,192	$ 1,522,553	$ 5,261,411
14. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
15. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
16. IP Telephony	$ -	$ 2,579,077	$ 2,579,077	$ 2,579,077	$ 2,579,077	$ 10,316,308
17. Replace by IP Telephony Maintenance	$ (200,263)	$ (400,526)	$ (400,526)	$ (400,526)	$ (400,526)	$ (1,802,366)
18. Net Maintenance	**$ (281,136)**	**$ 3,126,229**	**$ 3,247,473**	**$ 3,325,549**	**$ 3,479,342**	**$ 12,897,456**
19. Data Network Circuit Capacity	$ -	$ -	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
20. Circuits	$ (811,853)	$ (109,710)	$ (87,768)	$ (87,768)	$ (1,097,099)	$ (2,194,198)
21. Toll Bypass	$ -	($460,147)	($788,662)	($1,442,343)	($2,504,883)	$ (5,196,036)
22. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
23. MACs	$ (780,793)	$ (780,793)	$ (780,793)	$ (780,793)	$ (780,793)	$ (3,903,967)
24. Total Anticipated Savings	**$ (1,592,647)**	**$ (1,350,650)**	**$ (1,965,883)**	**$ (2,825,337)**	**$ (5,411,640)**	**$ (13,146,157)**
25. Total Ongoing Costs/(Savings)	**$ (1,873,782)**	**$ 1,775,578**	**$ 2,295,350**	**$ 1,513,972**	**$ (918,538)**	**$ 2,792,580**
26. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	**$ 30,383,141**	**$ (7,622,915)**	**$ (7,086,803)**	**$ (8,360,197)**	**$ (8,682,782)**	**$ (1,369,556)**

Decentralized Data Network Refresh Loss/(Savings)						
27. ATS Migration	$ (6,262,923)	$ (12,525,846)	$ (12,525,846)	$ (12,525,846)	$ (12,525,846)	$ (56,366,307)
28. MAGNET/WAN FTE	$ 29,800	$ 59,600	$ 59,600	$ 59,600	$ 59,600	$ 268,200
29. Telephony Services						$ -
a. 35 or less Employees						$ -
1. Implementation						$ -
A. Installation	$ 23,912					$ 23,912
B. Phone Purchase	$ 10,675					$ 10,675
2. Monthly						$ -
A. Line	$ 107,604	$ 215,208	$ 215,208	$ 215,208	$ 215,208	$ 968,436
B. Voice Messaging	$ 32,025	$ 64,050	$ 64,050	$ 64,050	$ 64,050	$ 288,225
b. 36 plus Employees refer to 7. IP Telephony Numbers						$ -
30. Long Distance						$ -
a. ATS Long Distance Charges	$ 3,222,294	$ 6,444,588	$ 6,444,588	$ 6,444,588	$ 6,444,588	$ 29,000,646
b. ATS Private Tandem Network Minutes	$ 457,396	$ 377,041	$ 300,344	$ 240,554	$ 182,958	$ 1,558,293
c. Carrier PICX	$ 140,000					$ 140,000
31. Web Hosting						$ -
a. Implementation	$ 166,000					$ 166,000
b. Monthly	$ 740	$ 1,481	$ 1,481	$ 1,481	$ 1,481	$ 6,664
32. ISP						$ -
a. 35 or less Employees						$ -
1. Transport						$ -
A. Implementation	$ 4,257					$ 4,257
B. Monthly	$ 22,704	$ 45,408	$ 45,408	$ 45,408	$ 45,408	$ 204,336
2. Internet						$ -
A. Implementation	$ 645					$ 645
B. Monthly	$ 5,663	$ 11,326	$ 11,326	$ 11,326	$ 11,326	$ 50,968
b. 36 plus Employees						$ -
1. Transport						$ -
A. Implementation	$ 49,500					$ 49,500
B. Monthly	$ 66,000	$ 132,000	$ 132,000	$ 132,000	$ 132,000	$ 594,000
2. Internet Monthly	$ 234,300	$ 468,600	$ 468,600	$ 468,600	$ 468,600	$ 2,108,700
33. Call Centers						$ -
a. Startup	$ 5,089,300					$ 5,089,300
b. Monthly						$ -
1. Carrier Costs	$ 120,600	$ 241,200	$ 241,200	$ 241,200	$ 241,200	$ 1,085,400
2. Vendor Support	$ 142,033	$ 284,065	$ 284,065	$ 284,065	$ 284,065	$ 1,278,293
3. Equip/Maint/License	$ 254,465	$ 508,930	$ 508,930	$ 508,930	$ 508,930	$ 2,290,185
4. FTE Costs	$ 140,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 1,260,000
34. Connection to PSTN						$ -
a. 35 or less Employees refer to 27. a.						$ -
b. 36 to 100 Employees						$ -
1. Implementation	$ 7,200					$ 7,200
2. Monthly	$ 86,400	$ 172,800	$ 172,800	$ 172,800	$ 172,800	$ 777,600
c. 101 - 245 Employees						$ -
1. Implementation	$ 14,400					$ 14,400
2. Monthly	$ 172,800	$ 345,600	$ 345,600	$ 345,600	$ 345,600	$ 1,555,200
d. 246 plus Emloyees						$ -
1. Implementation	$ 69,597					$ 69,597
2. Monthly	$ 835,164	$ 1,670,328	$ 1,670,328	$ 1,670,328	$ 1,670,328	$ 7,516,476
35. FTE	$ 561,057	$ 1,122,114	$ 1,122,114	$ 1,122,114	$ 1,122,114	$ 5,049,512
36. Total Decentralized Loss/(Savings)	**$ 5,803,608**	**$ (81,508)**	**$ (158,204)**	**$ (217,995)**	**$ (275,590)**	**$ 5,070,312**
37. TCO Decentralized	$ 102,555,451	$ 58,664,280	$ 59,123,696	$ 57,790,511	$ 57,410,331	$ 335,544,269
38. Net Loss/(Savings) Decentralized	$ 36,186,749	$ (7,704,423)	$ (7,245,007)	$ (8,578,192)	$ (8,958,371)	$ 3,700,756

Financial Assumptions: Decentralized - Data Network Refresh (Toll Bypass)

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - For agencies migrating from ATS only; development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
3. Power in Closets - For agencies migrating from ATS only; upgrades needed to support IP Telephony:
    a. Security - assume that all closets have capability to lock today.
    b. Power - 95 % of MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ $750/room; 95% of rooms will need a large capacity UPS @ $3700/room.
    c. Number of closets - Based on agencies with ATS services.
    d. Environmental - 95% of closets need isolated A/C controls @ $500/room; 90% of MDF rooms need separte A/C unit at $2500/room.
    e. Installation Hardware - 10% of closets require additional data rack & associated cable management components @ $750/room.
4. Data Network Refresh: based on list prices & government discount; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. Costs based on list prices & government discounts.
7. IP Telephony - for agencies migrating from ATS:
    a. Core network & voice services enginneered for redundancy & survivability
    b. Engineered for basic 911 (additional costs may be required for E911).
    c. Remote sites where practicable, routers installed instead of call processors.
    d. Costs based on list prices & government discounts.
    e. Integrator costs of 10% are included in the implementation costs.
    f. Migration to IP Telephony in year 1 for ATS customers.
8. Training - Train the trainers session: IT voice personnel @ $14K/person & IT WAN personnel @ $6K/person based on employees in agencies with ATS services today.
9. Trade-In Value - 10% of capital investment based on bids received by State of Alaska.
10. Total Refresh Implementation - Sum of items 2 through 9.
11. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
12. Net Loss/(Savings) - Sum of items 10 through 11.
13. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
14. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
15. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
16. IP Telephony Maintenance - Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
17. Replace by IP Telephony Maintenance - Ongoing voice equipment maintenance costs that have been replaced with new equipment.
18. Net Maintenance - Sum of items 13. through 17.
19. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
20. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
21. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
22. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
23. MACs - Savings with moves, adds and changes due to implementation of IP Telephony (ATS customers):
    a. MAC average annual cost of $40 per employee based on average between ATS @ $16.28/employee & industry average @ $48/employee.
    b. Savings each year based on % migration to IP Telephony.
24. Total Anticipated Savings - Sum of items 20. through 23.
25. Total Ongoing Costs/(Savings) - Sum of items 18., 19., & 24.
26. Net Loss/(Savings) Data Network Refresh (Toll Bypass) - Sum of items 12. & 25.; represents incremental impact of implementing Data Network Refresh.
27. ATS Migration - Migration completed after year 1; 50% of ATS costs removed year 1; 100% year 2 - 5.
28. MAGNET/WAN FTE - 1 WAN FTE in ISD to manage network for agency mainframe applications that have traffic on MAGNET; average annual loaded salary from TCO - $59.6K.
29. Telephony Services - Implementation & ongoing costs for agency employees migrating from ATS services:
    a. 35 employees or less - Purchase Centrex services from statewide carrier contracts:
        1. Implementation per Centrex line - $56
        2. Cost to purchase phone - $25
        3. Monthly line charge - $42.00
        4. Monthly voice mail - $12.50
    b. 36 Plus Employees - Migrating to IP Telephony & calculated in line 7.

30. Long Distance - Carrier bills paid by ATS will now be paid by each agency separately:
    a. 50% charged to agencies year 1 & 100% year 2-5 (offset for toll bypass in item 22.).
    b. Agencies will pay long distance rates to the Carriers @ $0.055/minute for traffic currently on the ATS private voice network; 50% of traffic year 1 & 100% yer 2-5 & offset for toll bypass in item 22.
    c. One time charge of $10 to change the Carrier PICX on each DID trunk and Centrex line - conversion of 14,000 lines.
31. Web Hosting - Transfer of agencies utilizing ATS for web hosting:
    a. Implementation costs - $1000 transfer & $1000 setup per web site
    b. Monthly costs - $12/10 mb.
    c. 75 agencies with 83 web sites
32. ISP - Transfer of agencies utilizing ATS for ISP (used ATS handset counts):
    a. 35 or less employees:
        1. Transport - 1 DSL per agency; implementation charge - $99; monthly charge - $88
        2. Internet - Implementation - $15/employee; monthly charge - $21.95/employee
    b. Medium & Large Agencies:
        1. Transport - 1 T1 per agency; Implementation charge - $900; monthly charge $200
        2. Internet - $710/month charge/agency for ISP bandwidth & agencies have their own e-mail
33. Call Centers - Agencies currently utilizing ATS for Call Centers will implement their own; implementation & ongoing costs based on costs to replicate ATS Call Centers.
34. Connection to PSTN:
    a. Small agencies have Cenrex as shown in item 30.
    b. Agencies 36 - 100 employees at location - 1 T1 including 2-way DID; implementation cost $900; monthly $1800
    c. Agencies 101 - 245 employees at location - 2 T1's including 2-way DID; implemention cost $900/T1; monthly $1800/T1
    d. 246 plus employees at location - for every 100 employees/location need 1 T1; implementation cost $900/T1; monthly $1800/T1
35. FTE - Additional FTE needs due to agencies now handling own telephone & WAN services; used industry standard of 1 IT employee/495 ports; average annual salary based on annual average loaded salary of $54037 for voice/WAN employee from TCO.
36. Total Decentralized Loss/(Savings) - Sum of items 27. Through 35.
37. TCO Dencentralized - Sum of items 1., 26., & 36.; represents new TCO after implementing Data Network Refresh, and the Decentralized service delivery option.
38. Net Loss/(Savings) Decentralized - Difference of items 1. & 37.; represents incremental impact to TCO.

Dencentralized - Data Network Refresh (Toll Bypass) & IP Telephony

Decentralized - Data Network Refresh (Toll Bypass) & IP Telephony	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass)						
2. Cabling	$ 6,966,020	$ 5,117,300	$ 4,906,880	$ 4,787,600	$ 4,187,200	$ 25,965,000
3. Power in Closets	$ 1,126,451	$ 442,403	$ 342,525	$ 185,411	$ 115,910	$ 2,212,700
4. Data Network Refresh						$ -
a. Equipment	$ 13,096,463	$ 1,868,043	$ 1,272,672	$ 1,124,339	$ 3,271,296	$ 20,632,814
b. Installation	$ 1,981,310	$ 330,639	$ 240,756	$ 204,710	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony	$ -	$ -	$ -	$ -	$ -	$ -
a.Equipment	$ 16,349,282	$ 5,805,179	$ 4,746,999	$ 2,622,648	$ 1,448,344	$ 30,972,451
b. Installation	$ 4,877,316	$ 1,839,892	$ 1,544,172	$ 969,989	$ 432,600	$ 9,663,971
8. Training	$ 406,486	$ 165,736	$ 127,601	$ 57,404	$ 42,325	$ 799,552
9. Trade-In Value	$ (2,944,575)	$ (767,322)	$ (601,967)	$ (374,699)	$ (471,964)	$ (5,160,526)
10. Total Refresh Implementation	**$ 44,776,502**	**$ 14,801,870**	**$ 13,008,638**	**$ 9,577,402**	**$ 9,674,409**	**$ 91,838,821**
11. Annual Debt Service	$ 9,750,708	$ 12,974,022	$ 15,806,834	$ 17,892,447	$ 19,999,185	$ 76,423,196
12. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
13. Net Loss/(Savings)	**$ (1,606,399)**	**$ 1,616,915**	**$ 4,449,727**	**$ 6,535,340**	**$ 8,642,078**	**$ 19,637,661**
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass)						
Maintenance:						
14. Data Network Refresh	$ -	$ 1,102,242	$ 1,246,747	$ 1,356,878	$ 1,454,157	$ 5,160,024
15. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
16. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
17. IP Telephony	$ -	$ 2,073,203	$ 2,791,164	$ 3,352,075	$ 3,648,749	$ 11,865,190
18. Replace by IP Telephony Maintenance	$ (200,263)	$ (400,526)	$ (400,526)	$ (400,526)	$ (400,526)	$ (1,802,366)
19. Net Maintenance	**$ (281,136)**	**$ 2,638,606**	**$ 3,445,631**	**$ 4,061,233**	**$ 4,480,617**	**$ 14,344,951**
20. Data Network Circuit Capacity	**$ -**	**$ -**	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
21. Circuits	$ (811,853)	$ (109,710)	$ (87,768)	$ (87,768)	$ (1,097,099)	$ (2,194,198)
22. Toll Bypass	$ -	($460,147)	($788,662)	($1,442,343)	($2,504,883)	$ (5,196,036)
23. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
24. MACs	$ (895,065)	$ (1,210,448)	$ (1,468,274)	$ (1,610,819)	$ (1,689,581)	$ (6,874,188)
25. Total Anticipated Savings	**$ (1,706,918)**	**$ (1,780,305)**	**$ (2,653,364)**	**$ (3,655,363)**	**$ (6,320,428)**	**$ (16,116,378)**
26. Total Ongoing Costs/(Savings)	**$ (1,988,054)**	**$ 858,301**	**$ 1,806,027**	**$ 1,419,630**	**$ (826,050)**	**$ 1,269,854**
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	**$ (3,594,453)**	**$ 2,475,216**	**$ 6,255,754**	**$ 7,954,970**	**$ 7,816,027**	**$ 20,907,515**
Decentralized Data Network Refresh Loss/(Savings)						
28. ATS Migration	$ (6,262,923)	$ (12,525,846)	$ (12,525,846)	$ (12,525,846)	$ (12,525,846)	$ (56,366,307)
29. MAGNET/WAN FTE	$ 29,800	$ 59,600	$ 59,600	$ 59,600	$ 59,600	$ 268,200
30. Telephony Services						$ -
a. 35 or less Employees						$ -
1. Implementation						$ -
A. Installation	$ 23,912					$ 23,912
B. Phone Purchase	$ 10,675					$ 10,675
2. Monthly						$ -
A. Line	$ 107,604	$ 215,208	$ 215,208	$ 215,208	$ 215,208	$ 968,436
B. Voice Messaging	$ 32,025	$ 64,050	$ 64,050	$ 64,050	$ 64,050	$ 288,225
b. 36 plus Employees refer to 7. IP Telephony Numbers						$ -

31. Long Distance							$ -
a. ATS Long Distance Charges	$ 3,222,294	$ 6,444,588	$ 6,444,588	$ 6,444,588	$ 6,444,588	$ 29,000,646	
b. ATS Private Tandem Network Minutes	$ 457,396	$ 377,041	$ 300,344	$ 240,554	$ 182,958	$ 1,558,293	
c. Carrier PICX	$ 140,000					$ 140,000	
32. Web Hosting						$ -	
a. Implementation	$ 166,000					$ 166,000	
b. Monthly	$ 740	$ 1,481	$ 1,481	$ 1,481	$ 1,481	$ 6,664	
33. ISP						$ -	
a. 35 or less Employees						$ -	
1. Transport						$ -	
A. Implementation	$ 4,257					$ 4,257	
B. Monthly	$ 22,704	$ 45,408	$ 45,408	$ 45,408	$ 45,408	$ 204,336	
2. Internet						$ -	
A. Implementation	$ 645					$ 645	
B. Monthly	$ 5,663	$ 11,326	$ 11,326	$ 11,326	$ 11,326	$ 50,968	
b. 36 plus Employees						$ -	
1. Transport						$ -	
A. Implementation	$ 49,500					$ 49,500	
B. Monthly	$ 66,000	$ 132,000	$ 132,000	$ 132,000	$ 132,000	$ 594,000	
2. Internet Monthly	$ 234,300	$ 468,600	$ 468,600	$ 468,600	$ 468,600	$ 2,108,700	
34. Call Centers						$ -	
a. Startup	$ 5,089,300					$ 5,089,300	
b. Monthly						$ -	
1. Carrier Costs	$ 120,600	$ 241,200	$ 241,200	$ 241,200	$ 241,200	$ 1,085,400	
2. Vendor Support	$ 142,033	$ 284,065	$ 284,065	$ 284,065	$ 284,065	$ 1,278,293	
3. Equip/Maint/License	$ 254,465	$ 508,930	$ 508,930	$ 508,930	$ 508,930	$ 2,290,185	
4. FTE Costs	$ 140,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 1,260,000	
35. Connection to PSTN						$ -	
a. 35 or less Employees refer to 27. a.						$ -	
b. 36 to 100 Employees						$ -	
1. Implementation	$ 7,200					$ 7,200	
2. Monthly	$ 86,400	$ 172,800	$ 172,800	$ 172,800	$ 172,800	$ 777,600	
c. 101 - 245 Employees						$ -	
1. Implementation	$ 14,400					$ 14,400	
2. Monthly	$ 172,800	$ 345,600	$ 345,600	$ 345,600	$ 345,600	$ 1,555,200	
d. 246 plus Emloyees						$ -	
1. Implementation	$ 69,597					$ 69,597	
2. Monthly	$ 835,164	$ 1,670,328	$ 1,670,328	$ 1,670,328	$ 1,670,328	$ 7,516,476	
36. FTE	$ 561,057	$ 1,122,114	$ 1,122,114	$ 1,122,114	$ 1,122,114	$ 5,049,512	
37. Total Decentralized Loss/(Savings)	**$ 5,803,608**	**$ (81,508)**	**$ (158,204)**	**$ (217,995)**	**$ (275,590)**	**$ 5,070,312**	
38. TCO Decentralized	$ 68,577,857	$ 68,762,411	$ 72,466,253	$ 74,105,678	$ 73,909,140	$ 357,821,340	
39. Net Loss/(Savings) Decentralized	$ 2,209,155	$ 2,393,708	$ 6,097,551	$ 7,736,976	$ 7,540,438	$ 25,977,827	
40. Debt Services Remaining						$ 23,572,727	

Financial Assumptions: Decentralized - Data Network Refresh (Toll Bypass) & IP Telephony

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
3. Power in Closets - Upgrades needed to support IP Telephony:
    a. Security - assume that all closets have capability to lock today.
    b. Power - 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ $750/room; 95% of rooms will need a large capacity UPS @ $3700/room.
    c. Number of closets - of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus - 175 IDF & 23 MDF; off Phoenix mall sites - 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
    d. Environmental - 95% of closets need isolated A/C controls @ $500/room; 90% of MDF rooms need separte A/C unit at $2500/room.
    e. Installation Hardware - 10% of closets require additional data rack & associated cable management components @ $750/room.
4. Data Network Refresh: based on list prices & government discount; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. Costs based on list prices & government discounts.
7. IP Telephony:
    a. Core network & voice services enginneered for redundancy & survivability
    b. Engineered for basic 911 (additional costs may be required for E911).
    c. Remote sites where practicable, routers installed instead of call processors.
    d. Costs based on list prices & government discounts.
    e. Integrator costs of 10% are included in the implementation costs.
    f. Migration to IP Telephony over 5 years based on year 1 transition of ATS customer to IP Telephony, PBX useful life, data network upgrade, & building cabling needs.
8. Training - Train the trainers session: 42 IT voice personnel @ $14K/person & 42 IT WAN personnel @ $6K/person.
9. Trade-In Value - 10% of capital investment based on bids received by State of Alaska.
10. Total Refresh & IPT Implementation - Sum of items 2 through 9.
11. Annual Debt Service - Financing of Implementation costs @ 3.4%.
12. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
13. Net Loss/(Savings) - Sum of items 10 through 12.
14. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
15. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
16. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
17. IP Telephony Maintenance - Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
18. Replace by IP Telephony Maintenance - Ongoing voice equipment maintenance costs that have been replaced with new equipment.
19. Net Maintenance - Sum of items 14. through 18.
20. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
21. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
22. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
23. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
24. MACs - Savings with moves, adds and changes due to implementation of IP Telephony:
    a. MAC average annual cost of $40 per employee based on average between ATS @ $16.28/employee & industry average @ $48/employee.
    b. Savings each year based on % migration to IP Telephony.
25. Total Anticipated Savings - Sum of items 21. through 24.
26. Total Ongoing Costs/(Savings) - Sum of items 19., 20., & 25.
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT - Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IP Telephony.
28. ATS Migration - Migration completed after year 1; 50% of ATS costs removed year 1; 100% year 2 - 5.
29. MAGNET/WAN FTE - 1 WAN FTE in ISD to manage network for agency mainframe applications that have traffic on MAGNET; average annual loaded salary from TCO - $59.6K.
30. Telephony Services - Implementation & ongoing costs for agency employees migrating from ATS services:
    a. 35 employees or less - Purchase Centrex services from statewide carrier contracts:
        1. Implementation per Centrex line - $56
        2. Cost to purchase phone - $25
        3. Monthly line charge - $42.00
        4. Monthly voice mail - $12.50

b. 36 Plus Employees - Migrating to IP Telephony & calculated in line 7.

31. Long Distance - Carrier bills paid by ATS will now be paid by each agency separately:
    a. 50% charged to agencies year 1 & 100% year 2-5 (offset for toll bypass in item 22.).
    b. Agencies will pay long distance rates to the Carriers @ $0.055/minute for traffic currently on the ATS private voice network; 50% of traffic year 1 & 100% yer 2-5 & offset for toll bypass in item 22.
    c. One time charge of $10 to change the Carrier PICX on each DID trunk and Centrex line - conversion of 14,000 lines.
32. Web Hosting - Transfer of agencies utilizing ATS for web hosting:
    a. Implementation costs - $1000 transfer & $1000 setup per web site
    b. Monthly costs - $12/10 mb.
    c. 75 agencies with 83 web sites
33. ISP - Transfer of agencies utilizing ATS for ISP (used ATS handset counts):
    a. 35 or less employees:
        1. Transport - 1 DSL per agency; implementation charge - $99; monthly charge - $88
        2. Internet - Implementation - $15/employee; monthly charge - $21.95/employee
    b. Medium & Large Agencies:
        1. Transport - 1 T1 per agency; Implementation charge - $900; monthly charge $200
        2. Internet - $710/month charge/agency for ISP bandwidth & agencies have their own e-mail
34. Call Centers - Agencies currently utilizing ATS for Call Centers will implement their own; implementation & ongoing costs based on costs to replicate ATS Call Centers.
35. Connection to PSTN:
    a. Small agencies have Cenrex as shown in item 30.
    b. Agencies 36 - 100 employees at location - 1 T1 including 2-way DID; implementation cost $900; monthly $1800
    c. Agencies 101 - 245 employees at location - 2 T1's including 2-way DID; implemention cost $900/T1; monthly $1800/T1
    d. 246 plus employees at location - for every 100 employees/location need 1 T1; implementation cost $900/T1; monthly $1800/T1
36. FTE - Additional FTE needs due to agencies now handling own telephone & WAN services; used industry standard of 1 IT employee/495 ports; average annual salary based on annual average loaded salary of $54037 for voice/WAN employee from TCO.
37. Total Decentralized Loss/(Savings) - Sum of items 28. Through 36.
38. TCO Dencentralized - Sum of items 1., 27., & 37.; represents new TCO after implementing Data Network Refresh, IP Telephony, and the Decentralized service delivery option.
39. Net Loss/(Savings) Decentralized - Difference of items 1. & 38.; represents incremental impact to TCO.
40. Debt Services Remaining - debt service remaining after year 5.

Shared Services - Data Network Refresh (Toll Bypass)

Shared Services - Data Network Refresh (Toll Bypass)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass)						
2. Cabling	$ -	$ -	$ -	$ -	$ -	$0
3. Power in Closets	$0	$0	$0	$0	$0	$0
4. Data Network Refresh						
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$2,917,748
7. IP Telephony	$0	$0	$0	$0	$0	$0
a. Equipment						
b. Installation						
8. Training	$0	$0	$0	$0	$0	$0
9. Trade-In Value	($754,763)	($327,130)	($327,130)	($327,130)	($327,130)	($2,063,281)
10. Total Refresh Implementation	**$10,521,938**	**$3,592,863**	**$4,021,863**	**$3,592,863**	**$3,592,863**	**$25,322,392**
11. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
12. Net Loss/(Savings)	$ (835,169)	$ (7,764,244)	$ (7,335,244)	$ (7,764,244)	$ (7,764,244)	$ (31,463,143)
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass)						
Maintenance:						
13. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$4,148,570
14. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$1,063,053
15. Replace by Data Network Refresh Maintenance	($80,873)	($242,619)	($404,364)	($566,110)	($646,983)	($1,940,950)
16. Net Maintenance	**($80,873)**	**$309,113**	**$470,975**	**$632,836**	**$875,570**	**$2,207,620**
17. Data Network Circuit Capacity	**$ -**	**$ -**	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$3,041,280**
Anticipated Savings from Toll Bypass						
18. Circuits	($137,137)	($411,412)	($685,687)	($959,962)	($1,097,099)	($3,291,297)
19. Toll Bypass	$0	($156,555)	($469,666)	($1,174,164)	($2,504,883)	($4,305,268)
20. FTE Savings			($308,659)	($514,432)	($1,028,864)	($1,851,956)
21. MACs	$0	$0	$0	$0	$0	$0
22. Total Anticipated Savings	**($137,137)**	**($567,967)**	**($1,464,012)**	**($2,648,558)**	**($4,630,847)**	**($9,448,521)**
23. Total Ongoing Costs/(Savings)	**($218,010)**	**($258,854)**	**$20,723**	**($1,001,962)**	**($2,741,517)**	**($4,199,621)**
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	**$ (1,053,179)**	**$ (8,023,098)**	**$ (7,314,521)**	**$ (8,766,206)**	**$ (10,505,760)**	**$ (35,662,764)**
Shared Services Loss/(Savings)						
25. FTE Savings	$0	($514,432)	($1,028,864)	($1,028,864)	($1,028,864)	($3,601,026)
26. Total Shared Svcs Loss/(Savings)	$0	**($514,432)**	**($1,028,864)**	**($1,028,864)**	**($1,028,864)**	**($3,601,026)**
27. TCO Shared Services	$65,315,523	$57,831,173	$58,025,317	$56,573,632	$54,834,078	$292,579,723
28. Net Loss/(Savings) Shared Service	($1,053,179)	($8,537,530)	($8,343,385)	($9,795,070)	($11,534,625)	($39,263,790)

Financial Assumptions: Shared Services - Data Network Refresh (Toll Bypass)

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Not applicable.
3. Power in Closets - Not applicable.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List prices plus government discounts.
7. IP Telephony - Not applicable.
8. Training - Not applicable.
9. Trade-In Value - 10% of capital investment.
10. Total Refresh Implementation - Sum of items 2 through 9.
11. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
12. Net Loss/(Savings) - Sum of items 10 through 11.
13. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
14. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
15. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
16. Net Maintenance - Sum of items 13. through 15.
17. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
18. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
19. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
20. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54,037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
21. MACs - Not applicable.
22. Total Anticipated Savings - Sum of items 18. through 21.
23. Total Ongoing Costs/(Savings) - Sum of items 16., 17., & 22.
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass) - Sum of items 12. & 23.; represents incremental impact of implementing Data Network Refresh.
25. FTE Savings - Expected FTE savings due to centralizing telecommunications services; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 - no savings.
    b. Year 2 - 5%
    c. Year 3 - 5 - 10%
26. Total Shared Services Loss/(Savings) - Sum of item 25.
27. TCO Shared Services - Sum of items 1., 24., & 26.; represents new TCO after implementing Data Network Refresh for the Shared Services service delivery option.
28. Net Loss/(Savings) Shared Services - Difference of items 1. & 27.; represents incremental impact to TCO.

Shared Services - Data Network Refresh (Toll Bypass) IP Telephony

Shared Services - Data Network Refresh (Toll Bypass) & IP Telephony	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass) & IPT						
2. Cabling	$ 5,789,800	$ 5,202,200	$ 5,043,800	$ 4,964,600	$ 4,964,600	$ 25,965,000
3. Power in Closets	$ 508,920	$ 459,135	$ 425,945	$ 409,350	$ 409,350	$ 2,212,700
4. Data Network Refresh						$ -
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony						$ -
a.Equipment	$ 8,664,893	$ 6,210,002	$ 5,791,326	$ 5,581,988	$ 4,724,243	$ 30,972,451
b. Installation	$ 2,553,665	$ 1,896,553	$ 1,780,630	$ 1,722,669	$ 1,710,454	$ 9,663,971
8. Training	$ 197,236	$ 164,576	$ 155,245	$ 150,579	$ 150,579	$ 818,215
9. Trade-In Value	$ (1,621,252)	$ (948,130)	$ (906,262)	$ (885,328)	$ (799,554)	$ (5,160,526)
10. Total Refresh & IPT Implementation	**$ 27,369,962**	**$ 16,904,329**	**$ 16,639,677**	**$ 15,863,850**	**$ 15,079,665**	**$ 91,857,483**
11. Annual Debt Service	$5,960,191	$9,641,345	$13,264,867	$16,719,441	$20,003,249	$ 65,589,093
12. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
13. Net Loss/(Savings)	**$ (5,396,916)**	**$ (1,715,762)**	**$ 1,907,760**	**$ 5,362,334**	**$ 8,646,142**	**$ 8,803,558**
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass) & IPT						
Maintenance:						
14. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$ 4,148,570
15. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
16. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
17. IP Telephony	$ -	$ 2,013,314	$ 2,954,080	$ 3,409,053	$ 3,833,206	$ 12,209,654
18. Replace by IP Telephony Maintenance	$ (121,899)	$ (330,869)	$ (500,657)	$ (661,738)	$ (805,405)	$ (2,420,568)
19. Net Maintenance	**$ (202,772)**	**$ 2,097,864**	**$ 3,137,008**	**$ 3,699,066**	**$ 4,328,592**	**$ 13,059,758**
20. Data Network Circuit Capacity	**$ -**	**$ -**	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
21. Circuits	$ (137,137)	$ (411,412)	$ (685,687)	$ (959,962)	$ (1,097,099)	$ (3,291,297)
22. Toll Bypass	$ -	$ (156,555)	$ (469,666)	$ (1,174,164)	$ (2,504,883)	$ (4,305,268)
23. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
24. MACs	$ (477,864)	$ (814,452)	$ (1,134,211)	$ (1,437,140)	$ (1,689,581)	$ (5,553,248)
25. Total Anticipated Savings	**$ (615,002)**	**$ (1,382,420)**	**$ (2,598,223)**	**$ (4,085,698)**	**$ (6,320,428)**	**$ (15,001,769)**
26. Total Ongoing Costs/(Savings)	**$ (817,774)**	**$ 715,444**	**$ 1,552,545**	**$ 627,129**	**$ (978,076)**	**$ 1,099,269**
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	**$ (6,214,689)**	**$ (1,000,318)**	**$ 3,460,305**	**$ 5,989,463**	**$ 7,668,066**	**$ 9,902,827**
Shared Services Loss/(Savings)						
28. FTE Savings	$ -	$ (514,432)	$ (1,028,864)	$ (1,028,864)	$ (1,028,864)	$ (3,601,026)
29. Total Shared Svcs Loss/(Savings)	**$ -**	**$ (514,432)**	**$ (1,028,864)**	**$ (1,028,864)**	**$ (1,028,864)**	**$ (3,601,026)**
30. TCO Shared Services	$ 60,154,013	$ 64,853,952	$ 68,800,143	$ 71,329,301	$ 73,007,904	$ 338,145,314
31. Net Loss/(Savings) Shared Service	$ (6,214,689)	$ (1,514,750)	$ 2,431,440	$ 4,960,598	$ 6,639,202	$ 6,301,801
32. Debt Services Remaining						$34,427,152

Financial Assumptions: Shared Services - Data Network Refresh (Toll Bypass) & IP Telephony

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
3. Power in Closets - Upgrades needed to support IP Telephony:
    a. Security - assume that all closets have capability to lock today.
    b. Power - 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ $750/room; 95% of rooms will need a large capacity UPS @ $3700/room.
    c. Number of closets - of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus - 175 IDF & 23 MDF; off Phoenix mall sites - 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
    d. Environmental - 95% of closets need isolated A/C controls @ $500/room; 90% of MDF rooms need separte A/C unit at $2500/room.
    e. Installation Hardware - 10% of closets require additional data rack & associated cable management components @ $750/room.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List price plus government discounts.
7. IP Telephony:
    a. Core network & voice services enginneered for redundancy & survivability
    b. Engineered for basic 911 (additional costs may be required for E911).
    c. Remote sites where practicable, routers installed instead of call processors.
    d. List prices with government discounts.
    e. Integrator costs of 10% are included in the implementation costs.
    f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
8. Training - Train the trainers session: 42 IT voice personnel @ $14K/person & 42 IT WAN personnel @ $6K/person.
9. Trade-In Value - 10% of capital investment based on bids received by State of Alaska.
10. Total Refresh & IPT Implementation - Sum of items 2 through 9.
11. Annual Debt Service - Financing of Implementation costs @ 3.4%.
12. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
13. Net Loss/(Savings) - Sum of items 10 through 12.
14. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
15. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
16. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
17. IP Telephony Maintenance - Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
18. Replace by IP Telephony Maintenance - Ongoing voice equipment maintenance costs that have been replaced with new equipment.
19. Net Maintenance - Sum of items 14. through 18.
20. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
21. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
22. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
23. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54,037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
24. MACs - Savings with moves, adds and changes due to implementation of IP Telephony:
    a. MAC average annual cost of $40 per employee based on average between ATS @ $16.28/employee & industry average @ $48/employee.
    b. Savings each year based on % migration to IP Telephony.
25. Total Anticipated Savings - Sum of items 21. through 24.
26. Total Ongoing Costs/(Savings) - Sum of items 19., 20., & 25.
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT - Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IP Telephony.
28. FTE Savings - Expected FTE savings due to centralizing telecommunications services; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 - no savings.
    b. Year 2 - 5%
    c. Year 2 - 5 - 10%
29. Total Shared Services Loss/(Savings) - Sum of item 28.
30. TCO Shared Services - Sum of items 1., 27., & 29; represents new TCO after implementing Data Network Refresh & IP Telephony for the Shared Services service delivery option.
31. Net Loss/(Savings) Shared Services - Difference of items 1. & 30.; represents incremental impact to TCO.
32. Debt Services Remaining - Debt service remaining after year 5.

Privatized - Data Network Refresh (Toll Bypass)

Privatized - Data Network Refresh (Toll Bypass)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass)						
2. Cabling	$ -	$ -	$ -	$ -	$ -	$0
3. Power in Closets	$0	$0	$0	$0	$0	$0
4. Data Network Refresh						
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$2,917,748
7. IP Telephony	$0	$0	$0	$0	$0	$0
a. Equipment						
b. Installation						
8. Training	$0	$0	$0	$0	$0	$0
9. Trade-In Value	($754,763)	($327,130)	($327,130)	($327,130)	($327,130)	($2,063,281)
10. Total Refresh Implementation	**$10,521,938**	**$3,592,863**	**$4,021,863**	**$3,592,863**	**$3,592,863**	**$25,322,392**
11. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
12. Net Loss/(Savings)	$ (835,169)	$ (7,764,244)	$ (7,335,244)	$ (7,764,244)	$ (7,764,244)	$ (31,463,143)
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass)						
Maintenance:						
13. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$4,148,570
14. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$1,063,053
15. Replace by Data Network Refresh Maintenance	($80,873)	($242,619)	($404,364)	($566,110)	($646,983)	($1,940,950)
16. Net Maintenance	**$ (80,873)**	**$ 309,113**	**$ 470,975**	**$ 632,836**	**$ 875,570**	**$ 2,207,620**
17. Data Network Circuit Capacity	$ -	$ -	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
18. Circuits	$ (137,137)	$ (411,412)	$ (685,687)	$ (959,962)	$ (1,097,099)	$ (3,291,297)
19. Toll Bypass	$ -	$ (156,555)	$ (469,666)	$ (1,174,164)	$ (2,504,883)	$ (4,305,268)
20. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
21. MACs	$ -	$ -	$ -	$ -	$ -	$ -
22. Total Anticipated Savings	**$ (137,137)**	**$ (567,967)**	**$ (1,464,012)**	**$ (2,648,558)**	**$ (4,630,847)**	**$ (9,448,521)**
23. Total Ongoing Costs/(Savings)	**$ (218,010)**	**$ (258,854)**	**$ 20,723**	**$ (1,001,962)**	**$ (2,741,517)**	**$ (4,199,621)**
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass)	**$ (1,053,179)**	**$ (8,023,098)**	**$ (7,314,521)**	**$ (8,766,206)**	**$ (10,505,760)**	**$ (35,662,764)**
Privatized Loss/(Savings)						
25. FTE Savings	$ (4,115,458)	$ (8,230,916)	$ (8,230,916)	$ (8,230,916)	$ (8,230,916)	$ (37,039,121)
26. Privatized Fee	$ 3,498,139	$ 6,996,278	$ 6,996,278	$ 6,996,278	$ 6,996,278	$ 31,483,253
27. Total Privatized Loss/(Savings)	**$ (617,319)**	**$ (1,234,637)**	**$ (1,234,637)**	**$ (1,234,637)**	**$ (1,234,637)**	**$ (5,555,868)**
28. TCO Privatized	$ 64,698,205	$ 57,110,968	$ 57,819,544	$ 56,367,859	$ 54,628,305	$ 290,624,881
29. Net Loss/(Savings) Privatized	$ (1,670,498)	$ (9,257,735)	$ (8,549,158)	$ (10,000,843)	$ (11,740,398)	$ (41,218,632)

Financial Assumptions: Privatized - Data Network Refresh (Toll Bypass)

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Not applicable.
3. Power in Closets - Not applicable.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List prices plus government discounts.
7. IP Telephony - Not applicable.
8. Training - Not applicable.
9. Trade-In Value - 10% of capital investment based on bids received by State of Alaska.
10. Total Refresh Implementation - Sum of items 2 through 9.
11. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
12. Net Loss/(Savings) - Sum of items 10 through 11.
13. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
14. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
15. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
16. Net Maintenance - Sum of items 13. through 15.
17. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
18. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
19. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
20. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54,037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
21. MACs - Not applicable.
22. Total Anticipated Savings - Sum of items 18. through 21.
23. Total Ongoing Costs/(Savings) - Sum of items 16., 17., & 22.
24. Net Loss/(Savings) Data Network Refresh (Toll Bypass) - Sum of items 12. & 23.; represents incremental impact of implementing Data Network Refresh.
25. FTE Savings - Expected FTE savings due to centralizing & privatizing telecommunications services; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Privatized transition complete during year 1.
    b. Year 1 - 40%
    c. Year 2 - 5 - 80%
26. Privatized Fee - 15% value proposition.
27. Total Privatized Loss/(Savings) - Sum of item 25. & 26.
28. TCO As Is - Sum of items 1., 24., & 27; represents new TCO after implementing Data Network Refresh for the Privatized service delivery option.
29. Net Loss/(Savings) Privatized - Sum of items 1. & 28.; represents incremental impact to TCO.

Privatized - Data Network Refresh (Toll Bypass) & IP Telephony

Privatized - Data Network Refresh (Toll Bypass) & IP Telephony	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1. TCO	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$ 66,368,703**	**$331,843,513**
Implementation Data Network Refresh (Toll Bypass) & IPT						
2. Cabling	$ 5,789,800	$ 5,202,200	$ 5,043,800	$ 4,964,600	$ 4,964,600	$ 25,965,000
3. Power in Closets	$ 508,920	$ 459,135	$ 425,945	$ 409,350	$ 409,350	$ 2,212,700
4. Data Network Refresh						$ -
a. Equipment	$ 7,547,631	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 3,271,296	$ 20,632,814
b. Installation	$ 811,322	$ 648,697	$ 648,697	$ 648,697	$ 648,697	$ 3,406,111
5.Data Network Circuit Capacity	$ -	$ -	$ 429,000	$ -	$ -	$ 429,000
6.Network Monitoring Tools	$ 2,917,748	$ -	$ -	$ -	$ -	$ 2,917,748
7. IP Telephony						$ -
a.Equipment	$ 8,664,893	$ 6,210,002	$ 5,791,326	$ 5,581,988	$ 4,724,243	$ 30,972,451
b. Installation	$ 2,553,665	$ 1,896,553	$ 1,780,630	$ 1,722,669	$ 1,710,454	$ 9,663,971
8. Training	$ 197,236	$ 164,576	$ 155,245	$ 150,579	$ 150,579	$ 818,215
9. Trade-In Value	$ (1,621,252)	$ (948,130)	$ (906,262)	$ (885,328)	$ (799,554)	$ (5,160,526)
10. Total Refresh & IPT Implementation	**$ 27,369,962**	**$ 16,904,329**	**$ 16,639,677**	**$ 15,863,850**	**$ 15,079,665**	**$ 91,857,483**
11. Annual Debt Service	$ 5,960,191	$ 9,641,345	$ 13,264,867	$ 16,719,441	$ 20,003,249	$ 65,589,093
12. Less Base Capital Budget	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (11,357,107)	$ (56,785,535)
13. Net Loss/(Savings)	**$ (5,396,916)**	**$ (1,715,762)**	**$ 1,907,760**	**$ 5,362,334**	**$ 8,646,142**	**$ 8,803,558**
Ongoing Costs/(Savings) Data Network Refresh (Toll Bypass) & IPT						
Maintenance:						
14. Data Network Refresh	$ -	$ 551,732	$ 875,339	$ 1,198,946	$ 1,522,553	$ 4,148,570
15. Network Monitoring Tools	$ -	$ 106,305	$ 212,611	$ 318,916	$ 425,221	$ 1,063,053
16. Replace by Data Network Refresh Maintenance	$ (80,873)	$ (242,619)	$ (404,364)	$ (566,110)	$ (646,983)	$ (1,940,950)
17. IP Telephony	$ -	$ 2,013,314	$ 2,954,080	$ 3,409,053	$ 3,833,206	$ 12,209,654
18. Replace by IP Telephony Maintenance	$ (121,899)	$ (330,869)	$ (500,657)	$ (661,738)	$ (805,405)	$ (2,420,568)
19. Net Maintenance	**$ (202,772)**	**$ 2,097,864**	**$ 3,137,008**	**$ 3,699,066**	**$ 4,328,592**	**$ 13,059,758**
20. Data Network Circuit Capacity	**$ -**	**$ -**	**$ 1,013,760**	**$ 1,013,760**	**$ 1,013,760**	**$ 3,041,280**
Anticipated Savings from Toll Bypass						
21. Circuits	$ (137,137)	$ (411,412)	$ (685,687)	$ (959,962)	$ (1,097,099)	$ (3,291,297)
22. Toll Bypass	$ -	$ (156,555)	$ (469,666)	$ (1,174,164)	$ (2,504,883)	$ (4,305,268)
23. FTE Savings			$ (308,659)	$ (514,432)	$ (1,028,864)	$ (1,851,956)
24. MACs	$ (477,864)	$ (814,452)	$ (1,134,211)	$ (1,437,140)	$ (1,689,581)	$ (5,553,248)
25. Total Anticipated Savings	**$ (615,002)**	**$ (1,382,420)**	**$ (2,598,223)**	**$ (4,085,698)**	**$ (6,320,428)**	**$ (15,001,769)**
26. Total Ongoing Costs/(Savings)	**$ (817,774)**	**$ 715,444**	**$ 1,552,545**	**$ 627,129**	**$ (978,076)**	**$ 1,099,269**
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT	**$ (6,214,689)**	**$ (1,000,318)**	**$ 3,460,305**	**$ 5,989,463**	**$ 7,668,066**	**$ 9,902,827**
Privatized Loss/(Savings)						
28. FTE Savings	$ (4,115,458)	$ (8,230,916)	$ (8,230,916)	$ (8,230,916)	$ (8,230,916)	$ (37,039,121)
29. Privatized Fee	$ 3,498,139	$ 6,996,278	$ 6,996,278	$ 6,996,278	$ 6,996,278	$ 31,483,253
30. Total Privatized Loss/(Savings)	**$ (617,319)**	**$ (1,234,637)**	**$ (1,234,637)**	**$ (1,234,637)**	**$ (1,234,637)**	**$ (5,555,868)**
31. TCO Privatized	$ 59,536,694	$ 64,133,747	$ 68,594,370	$ 71,123,528	$ 72,802,131	$ 336,190,471
32. Net Loss/(Savings) Privatized	$ (6,832,008)	$ (2,234,955)	$ 2,225,668	$ 4,754,825	$ 6,433,429	$ 4,346,958
33. Debt Services Remaining						$ 34,427,152

Financial Assumptions: Privatized - Data Network Refresh (Toll Bypass) & IP Telephony

1. TCO - Total Cost of Ownership of statewide telecommunications both operating expense and capital. Represents multiple funding sources including federal.
2. Cabling - Development numbers taken from the GITA Network Gap Report. Upgrades to CAT 5e building cable needed for IP Telephony. Some DOC cable needs upgrades for VoIP.
3. Power in Closets - Upgrades needed to support IP Telephony:
    a. Security - assume that all closets have capability to lock today.
    b. Power - 95% of closets for each MDF or IDF will require an isolated 208 volt single phase power feed to support a large-capacity UPS @ $750/room; 95% of rooms will need a large capacity UPS @ $3700/room.
    c. Number of closets - of the state's 968 sites, the closets needing upgrading: 198 on Phoenix campus - 175 IDF & 23 MDF; off Phoenix mall sites - 196 IDF & 6 MDF (power upgrades not needed in closets requiring just routers).
    d. Environmental - 95% of closets need isolated A/C controls @ $500/room; 90% of MDF rooms need separte A/C unit at $2500/room.
    e. Installation Hardware - 10% of closets require additional data rack & associated cable management components @ $750/room.
4. Data Network Refresh: based on list prices & government discounts; refresh based on 4 year cycle.
5. Data Network Circuit Capacity - Implementation costs to expand data network to handle increased voice traffic:
    a. Anything less than a T1 is upgraded to a T1
    b. 20% of existing T1's will need to double in capacity after 50% of the network has migrated.
    c. T1's are available to all State sites.
    d. Install @ $700 & existing monthly average costs from TCO
6. Network Monitoring Tools - Implemented year 1;1 per main site with LAN/WAN/Voice management capabilities - exception is DES with 2 due to size & diversity. List prices plus government discounts.
7. IP Telephony:
    a. Core network & voice services enginneered for redundancy & survivability
    b. Engineered for basic 911 (additional costs may be required for E911).
    c. Remote sites where practicable, routers installed instead of call processors.
    d. List prices with government discounts.
    e. Integrator costs of 10% are included in the implementation costs.
    f. Migration to IP Telephony over 5 years based on PBX useful life, data network upgrade, & building cabling needs.
8. Training - Train the trainers session: 42 IT voice personnel @ $14K/person & 42 IT WAN personnel @ $6K/person.
9. Trade-In Value - 10% of capital investment - based on bids received by State of Alaska.
10. Total Refresh & IPT Implementation - Sum of items 2 through 9.
11. Annual Debt Service - Financing of Implementation costs @ 3.4%.
12. Less Base Capital Budget - Capital in 2002 budget & assumed as part of ongoing fiscal year budgets.
13. Net Loss/(Savings) - Sum of items 10 through 12.
14. Data Network Refresh Maintenance - Ongoing maintenance costs associated with item 4.; assumed no maintenance costs first year.
15. Network Monitoring Tools Maintenance - Ongoing maintenance costs associated with item 6.; assumed no maintenance costs first year.
16. Replace by Data Network Refresh Maintenance - Ongoing data network maintenance costs that have been replaced with new equipment.
17. IP Telephony Maintenance - Ongoing maintenance costs associated with item 7.a.; assumed no maintenance costs first year.
18. Replace by IP Telephony Maintenance - Ongoing voice equipment maintenance costs that have been replaced with new equipment.
19. Net Maintenance - Sum of items 14. through 18.
20. Data Network Circuit Capacity - Ongoing costs for circuits identified in item 5.
21. Circuits - Savings from voice TIE lines that are removed as voice traffic is migrated to the data network.
22. Toll Bypass - Savings in long distance charges as the voice traffic is migrated to the data network:
    a. Assume have an opportunity to bypass 80% of the Intra-State minutes (that of the calls & minutes within the State, 80% of them are between State agency locations).
    b. As more of the State migrates to a converged network over 5 years, the more opportunity for toll bypass.
    c. Year 1 - no savings.
    d. Year 2 - 20% of minutes where converged network available.
    e. Year 3 - 30% of minutes where converged network available.
    f. Year 4 - 50% of minutes where converged network available.
    g. Year 5 - 80% of minutes where converged network available.
    h. Year 6 - 100% of minutes where converged network available (not shown in financials as is only 5 year view).
23. FTE Savings - Anticipated FTE savings due to convergence of the network; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Year 1 & 2 - no savings
    b. Year 3 - 3%
    c. Year 4 - 5 %
    d. Year 5 - 10%
24. MACs - Savings with moves, adds and changes due to implementation of IP Telephony:
    a. MAC average annual cost of $40 per employee based on average between ATS @ $16.28/employee & industry average @ $48/employee.
    b. Savings each year based on % migration to IP Telephony.
25. Total Anticipated Savings - Sum of items 21. through 24.
26. Total Ongoing Costs/(Savings) - Sum of items 19., 20., & 25.
27. Net Loss/(Savings) Data Network Refresh (Toll Bypass) & IPT - Sum of items 13. & 26.; represents incremental impact of implementing Data Network Refresh & IP Telephony.
28. FTE Savings - Expected FTE savings due to centralizing & privatizing telecommunications services; based on current voice/WAN average annual loaded salary of $54037 (from TCO) & 190.4 employees (from TCO):
    a. Privatized transition complete during year 1.
    b. Year 1 - 40%
    c. Year 2 - 5 - 80%
29. Privatized Fee - 85% of FTE savings.
30. Total Privatized Loss/(Savings) - Sum of item 28. & 29.
31. TCO Privatized - Sum of items 1., 27., & 30; represents new TCO after implementing Data Network Refresh & IP Telephony for the Privatized service delivery option.
32. Net Loss/(Savings) Privatized - Sum of items 1. & 31; represents incremental impact to TCO.
33. Debt Services Remaining - Debt service remaining after year 5.